

We claim:

1. A method of placing ads on a client, comprising:
  - receiving notification of a context change in the client;
  - re-evaluating an order of a plurality of potential display ads in response to the context change notification, to yield a next ad to be placed;
  - receiving an ad request; and
  - sending the previously determined next ad to be placed in response to the received ad request.
2. The method of claim 1, wherein the context change reflects a change in a video stream being viewed by a user of the client.
3. The method of claim 2, wherein the context change includes a channel change.
4. The method of claim 1, wherein the re-evaluation of ads is performed asynchronously with a change in the collection of ads.
5. The method of claim 1, wherein the re-evaluation of the ordering of the plurality of ads includes re-ordering a heap data structure containing pointers to ones of the plurality of ads.
6. The method of claim 1, wherein the re-evaluation of the ordering of the plurality of ads includes a re-ordering of a heap data structure containing pointers to ones of the plurality of ads.
7. The method of claim 1, wherein the re-evaluation of the ordering of the plurality of ads includes evaluation of an interpreted placement rule for at least some of the ads.
8. The method of claim 1, wherein the client is a video replay system.

9. The method of claim 1, wherein the re-evaluation of the ordering of the plurality of ads includes evaluation of a placement value for at least one ad when a trigger parameter of the ad is changed.

10. The method of claim 1, wherein the re-evaluation of the plurality of ads includes evaluation of a weight value for at least one of the plurality of ads when a trigger parameter of the ad is changed.

11. The method of claim 1, wherein the next ad to be placed is the ad at the top of a heap data structure after re-evaluation of the ordering of the plurality of ads.

12. The method of claim 1, wherein receiving an ad request includes receiving an ad request asynchronously to the notification of context change.

13. The method of claim 1, wherein sending the previously determined next ad to be placed includes sending an ad on the top of a heap data structure.

14. The method of claim 1, wherein sending the previously determined next ad to be placed includes sending a next ad having a highest weighted placement value in accordance with the ads placement rule and weight rule.

15. The method of claim 1, further comprising:  
re-evaluating the ordering of the plurality of ads after an ad is returned in response to the ad request.

16. The method of claim 1, wherein the client is a video replay system.

17. The method of claim 1, wherein the next ad to be displayed is a full-page ad.

18. The method of claim 1, wherein the next ad to be displayed is a banner ad.

19. The method of claim 1, wherein the next ad to be displayed is to be placed in a predetermined location on a display device.

20. The method of claim 1, wherein each of the plurality of ads has an associated rule set containing a placement rule and at least one local parameter value.

21. The method of claim 1, wherein at least one of the plurality of ads has an associated placement rule.

22. The method of claim 1, wherein at least one of the plurality of ads has an associated weight rule.

23. The method of claim 1, wherein at least one of the plurality of ads has an associated expiration rule.

24. The method of claim 1, wherein at least one of the plurality of ads has an associated trigger rule.

25. The method of claim 1, wherein at least one of the plurality of ads has associated local parameters defined in a rule set of the rule.

26. The method of claim 1, wherein the rule set for each rule is transmitted to the client machine in XML format.

27. The method of claim 1, wherein at least one global time parameter of the system is updated at a predetermined interval.

28. The method of claim 27, wherein the global time parameters is a trigger parameter that causes re-evaluation of an associated ad's placement value when the value

of the global time parameter is updated.

29. The method of claim 1, wherein a global context parameter of the client is updated when the client context changes.

30. The method of claim 29, wherein the global context parameter is a trigger parameter that causes re-evaluation of an associated ad's placement value when the value of the global context parameter is changed.

31. The method of claim 1, wherein sending the previously determined next ad includes sending the previously determined next ad when the client enters a pause mode.

32. The method of claim 1, wherein sending the previously determined next ad includes sending the previously determined next ad when the client displays a program guide having an area reserved for an ad.

33. The method of claim 1, wherein sending the previously determined next ad includes sending the previously determined next ad when the client displays a zone program guide having an area reserved for an ad.

34. The method of claim 1, wherein a specific rule for an ad is evaluated following selection of that ad that permits the ad to modify at least one of: its local parameters; its weight; and its location on the heap.

35. The method of claim 1, wherein receiving a context change, re-evaluating, receiving an ad request, and sending the next ad to be placed are performed by the client.

36. A system, comprising:

- a server side system providing a rule set for each ad that can be displayed;
- a client side system that receives the rule sets and determines a next ad to

place in accordance with parameters in the rule set denoting at least one of program context, history of the client side system, a user profile, and a frequency of ad display in the past.

37. The system of claim 36, wherein the server side system further provides content, including at least one of a history, video, or sound file.

38. A method of displaying an ad on a client-side machine, comprising:  
storing a plurality of ads on the client-side machine;  
evaluating the stored ads whenever a system context change occurs to determine a next ad to be displayed;  
displaying the next ad to be displayed when the client-side machine encounters an ad display opportunity.

39. The method of claim 37, wherein the ad display opportunity is display of a pause ad.

40. The method of claim 37, wherein the ad display opportunity is display of a programming guide.

41. The method of claim 37, wherein the ad display opportunity is display of a zone programming guide.

42. An apparatus to place ads on a client, comprising:  
means for receiving notification of a context change in the client;  
means for re-evaluating an order of a plurality of potential display ads in response to the context change notification, to yield a next ad to be placed;  
means for receiving an ad request; and  
means for sending the previously determined next ad to be placed in response to the received ad request.

43. The apparatus of claim 41, wherein the client is a video replay system.

44. An apparatus for displaying an ad on a video replay machine, comprising:  
means for storing a plurality of ads on the video replay machine;  
means for evaluating the stored ads whenever a system context change occurs to determine a next ad to be displayed;  
means for displaying the next ad to be displayed when the video replay machine encounters an ad display opportunity.

45. The apparatus of claim 43, wherein the ad display opportunity is display of a pause ad.

46. The apparatus of claim 43, wherein the ad display opportunity is display of a programming guide.

47. The apparatus of claim 43, wherein the ad display opportunity is display of a zone programming guide.

48. The apparatus of claim 43, wherein the video replay unit is a client-side machine.

49. A computer program product, comprising instructions stored on a computer readable medium, to effect a method comprising:  
receiving notification of a context change in the client;  
re-evaluating an order of a plurality of potential display ads in response to the context change notification, to yield a next ad to be placed;  
receiving an ad request; and  
sending the previously determined next ad to be placed in response to the received ad request.

50. The computer program product of claim 48, wherein the computer readable medium is within a video replay system.

51. A computer program product, comprising instructions stored on a computer readable medium, to effect a method comprising:

storing a plurality of ads on a video replay unit;

evaluating the stored ads whenever a system context change occurs to determine a next ad to be displayed;

displaying the next ad to be displayed when the video replay unit encounters an ad display opportunity.

52. The computer program product of claim 50, wherein the ad display opportunity is display of a pause ad.

53. The computer program product of claim 50, wherein the ad display opportunity is display of a programming guide.

54. The computer program product of claim 50, wherein the ad display opportunity is display of a zone programming guide.